Tri-Party Agreement

100 Area ground water cleanups will protect salmon spawning beds

The Washington Department of Ecology, the U.S. Environmental Protection Agency and the U.S. Department of Energy want your comments on proposed plans for two ground water cleanup projects at the Hanford Site. Plans call for reduction of toxic chromium from ground water in the 100-HR-3 and 100-KR-4 areas to protect aquatic life in the Columbia River. A 45-day public comment period begins ***September 11*** *and ends* ***October 25, 1995.*** *All comments will be considered by the agencies before an interim Record of Decision is issued.*

Background

Between 1943 and 1963, nine plutonium production reactors were built near the Columbia River, about 35 miles north of Richland, Washington. They were cooled by river water, which passed through them at rates as high as 200,000 gallons per minute. The water was treated to stabilize its pH value and sodium dichromate, the source of much of the chromium, was added to inhibit corrosion in reactor piping. After a single trip through the reactor cores, water was returned either to the river, or if ruptured uranium fuel elements were detected, water was sent to the ground through cribs or trenches.

Aquifers, contaminated by cooling water and other wastes, continue to percolate into the Columbia through the river bed, often in the gravelly areas where salmon spawn. Hexavalent chromium dissolves readily in water and is considered toxic to young salmon at concentrations in water below limits believed safe for human use. In March 1995, divers collected samples from river bed sediments and gravels that showed hexavalent chromium concentrations higher than Environmental Protection Agency standards for protection of aquatic life.

The 51 mile Hanford Reach between Rocky Reach Dam and the City of Richland is the last free flowing stretch of the Columbia River in the United States above Bonneville Dam. It contains the only remaining salmon spawning beds on the main stem of the river.

Preferred cleanup option

These plans propose cleanup actions near five reactors, the D, DR and H reactors in an area designated the 100-HR-3 (ground water) Operable Unit and the K-West and K-East reactors in the 100-KR-4 (ground water) Operable Unit. D Reactor began operating in 1944; in 1971, K-East became the last of the five to permanently shut down.

Five alternatives have been examined, and a preferred alternative offered: pump contaminated ground water and treat it to remove chromium using an ion exchange system. After consideration of public comment, an interim action Record of Decision (ROD) will be issued under the Comprehensive Environmental Response and Liability Act (CERCLA or Superfund law).

Other alternatives include: (1) No action, with no monitoring; (2) Institutional controls and continue current actions, including moni-

Send written comments to:
Mr. Larry Gadbois
U.S. Environmental Protection Agency
712 Swift Avenue, Suite 5
Richland, WA 99532
(509) 376-9884

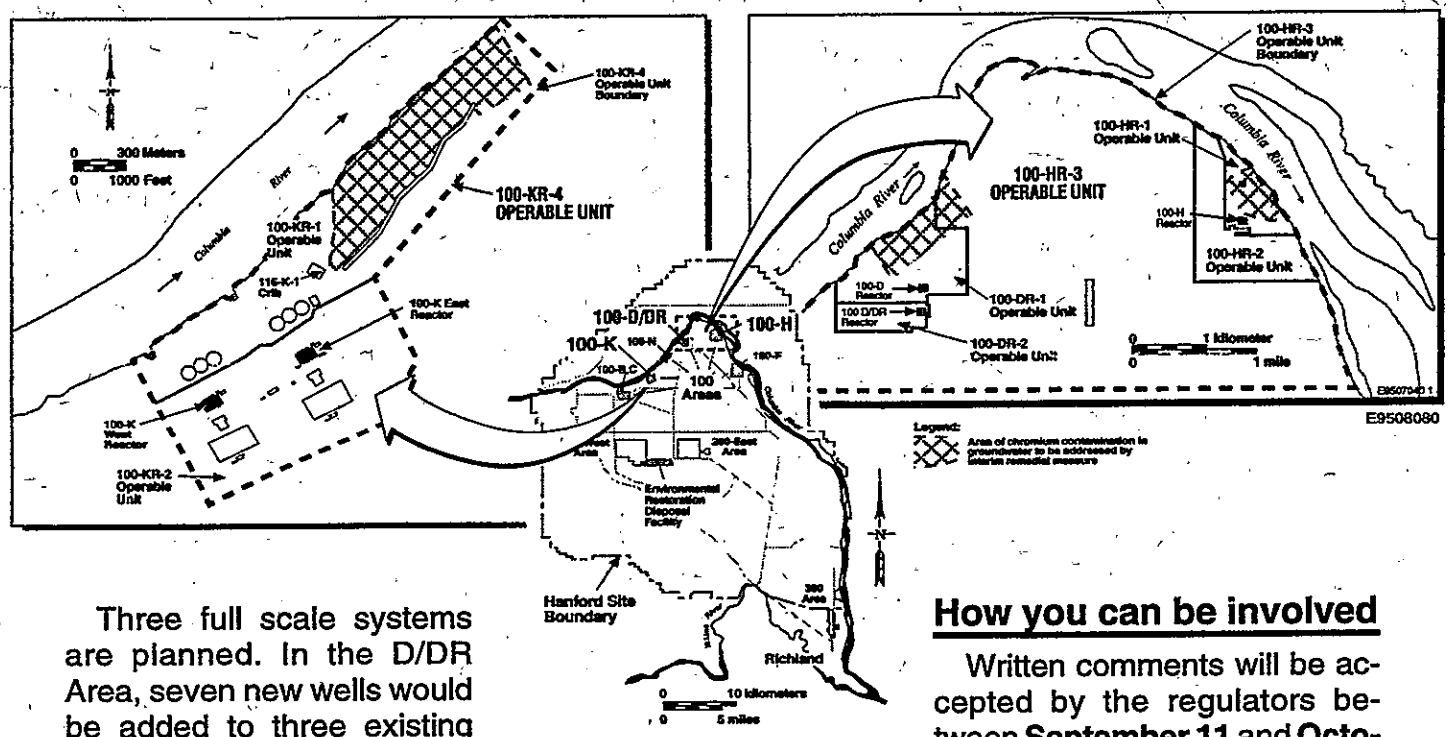
toring ground water; (3) Containment walls between the river and the contaminated aquifers; and (4) Pump and treat using a reverse osmosis system.

A pilot scale ion exchange pump-and-treat system has been operating in the D/DR Area. Between August 1994 and July 1995, it pumped more than four million gallons from three wells and successfully extracted 38 pounds of chromium.

trapped in the ion exchange resin beds would be disposed of in the Environmental Restoration Disposal Facility landfill.

Because the new wells will be positioned near the river to intercept ground water flows, a lower ratio of chromium recovery to water pumped than acheived in the pilot project may be expected. The D/DR Area pilot wells were sunk into the aquifer's highest chromium concentration.

Proposed 100 Area ground water treatment sites



Three full scale systems are planned. In the D/DR Area, seven new wells would be added to three existing wells, and it's projected each would extract about 10 gallons per minute. In the K Area, five new and six existing wells should be able to pump and treat 20 gallons per minute each, and in the H Area, one new well and eight existing wells are expected to work at around 25 gallons per minute each. In each system, treated water would be returned to the contaminated aquifer up hill from extraction wells located near the river. Chromium and any other contaminants

How you can be involved

Written comments will be accepted by the regulators between **September 11** and **October 25, 1995.** If requested, a public meeting will be scheduled.

All comments will be considered and responded to before any decision is issued. Detailed information about this proposal and other Hanford cleanup actions is available at the Hanford Information Repositories.

For copies of the proposed plan, call the Hanford Hotline toll free at 1-800-321-2008.

100-BC Area ground water cleanup will be final remedy

The 100-BC-5 ground water Operable Unit is one of three operable units associated with the 100 B/C reactor Area near the Columbia River. The other two units, 100-BC-1 and 100-BC-2, deal with contaminated soil sites.

100-BC-5 was evaluated as a candidate for an interim cleanup action. However, information gathered on the 100-BC-5 ground water indicates no interim action is required at this time to protect human health or the environment. This recommendation assumes the U.S. Department of Energy will retain control of the site until 2018. Therefore, direct contact with the ground water will not occur. The radionuclide strontium 90 is the primary contaminant of concern and has been detected in the 100-BC-5 ground water at low levels that pose little risk at this time.

The agencies believe the best way to protect the 100-BC-5 ground water and the Columbia River is to focus resources on removal of the sources of contamination in the 100-BC-1 and 100-BC-2 Operable Units. After the source units are removed, the 100-BC-5 ground water will be re-evaluated as part of the final remedy selection process. In addition, the 100-BC-5 ground water will continue to be monitored until the final remedy selection process has been completed.

200-UP-1 proposed pump and treat comment period extended

The Tri-Party agencies have extended until **October 6, 1995,** the public comment period on an Interim Remedial Proposed Plan for ground water cleanup in the 200-UP-1 operable unit. A **public meeting** will be held **Tuesday, September 26**, from 7 to 9 p.m. in Ecology's Kennewick office, 1315 W. 4th Ave. The proposed plan's preferred alternative calls for installation of a pump-and-treat system to remove uranium, technetium and carbon tetrachloride from the ground water. For more information, contact Dib Goswami, Ecology, (509) 736-3015, or Hanford Cleanup toll-free 1-800-321-2008.

Hanford Public Information Repositories

Seattle
University of Washington
Suzzallo Library
Government Publications Room
(206) 543-4664
Attn. Eleanor Chase

Portland
Portland State University
Branford Price Millar Library
Science and Engineering Floor
934 S.W. Harrison
(503) 725-3690
Attn. Michael Bowman or Susan Thomas

Spokane
Gonzaga University
Foley Center
E. 502 Boone
(509) 328-4220 Ext. 3844
Attn. Tim Fuhrman

Richland
USDOE Public Reading Room
Washington State University, Tri-Cities
100 Sprout Road, Room 130 West
(509) 376-8583
Attn. Terri Traub

The Tri-Party Agencies are equal opportunity and affirmative action employers.
If you have special accommodation needs, or require this matierial in an alternative format, contact Michelle Davis (360) 407-7126 (voice), or (360) 407-7206 (TDD).

printed on recycled paper

Focus on Hanford cleanup

Washington State Department of Ecology
Nuclear Waste Program
P.O. Box 47600
Olympia, WA 98504-7600

First Class Postage
paid by
Washington State
Department of Printing